

FIGURE 1

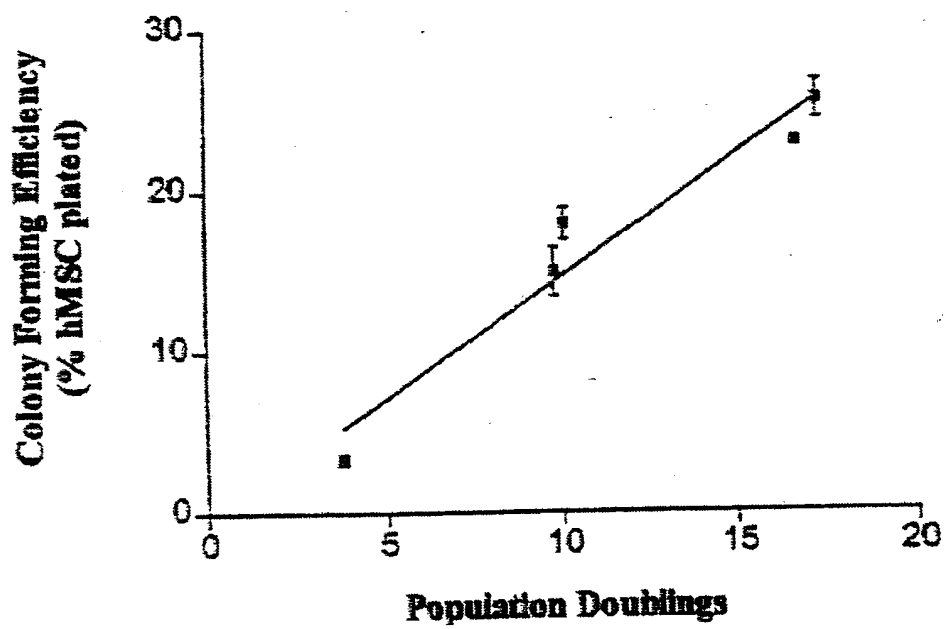


FIGURE 2

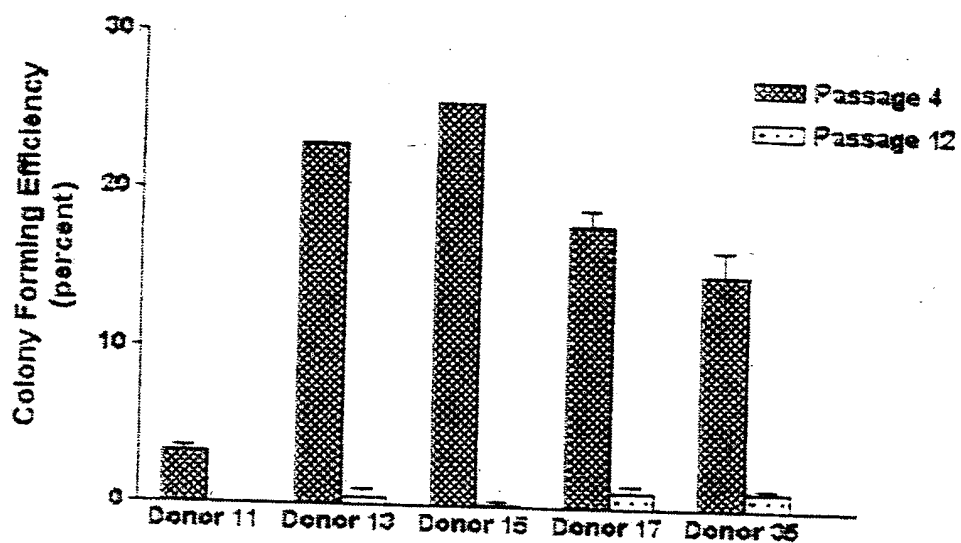


FIGURE 3A

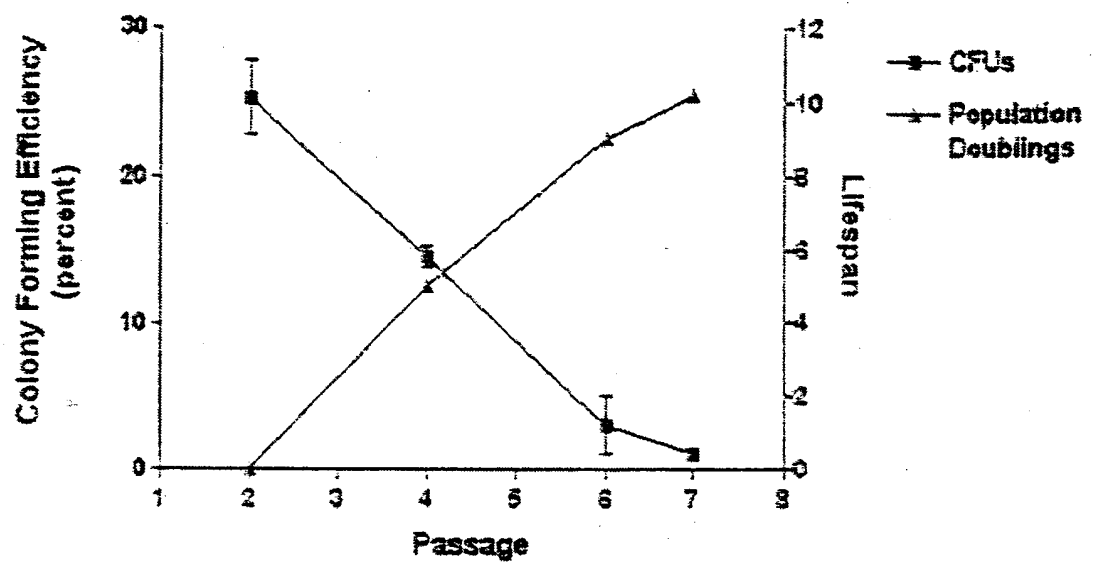


FIGURE 3B

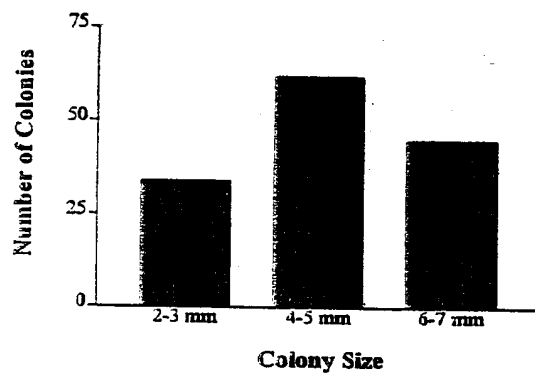


FIGURE 4

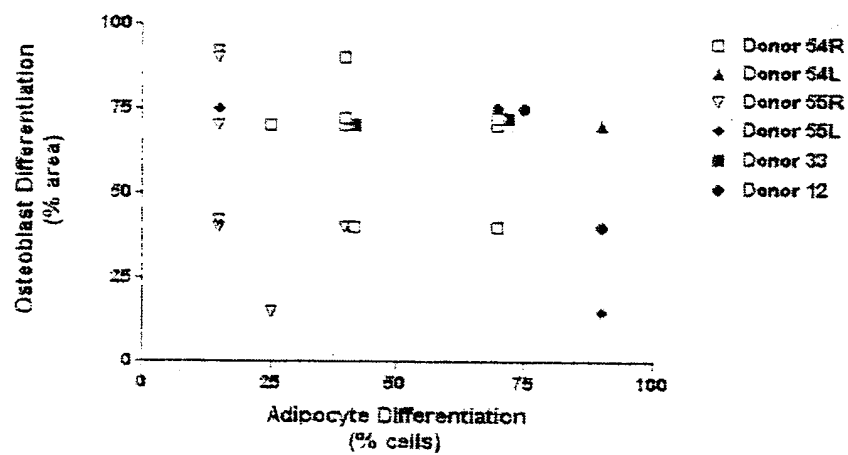


FIGURE 5

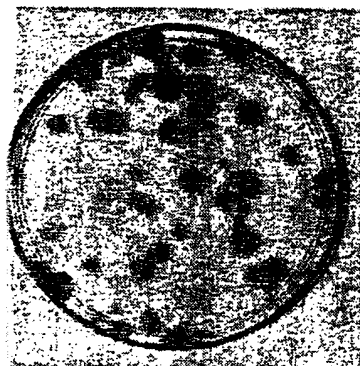


FIGURE 6A

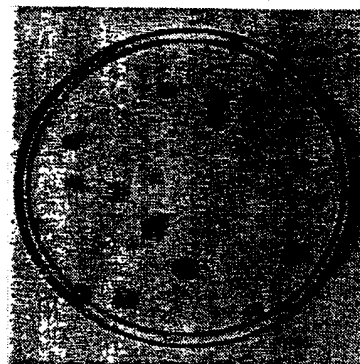


FIGURE 6B

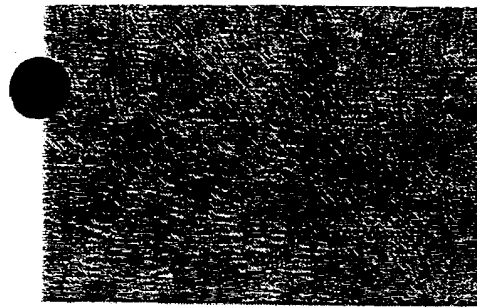


FIGURE 6C

FIGURE 6D

FIGURE 6E

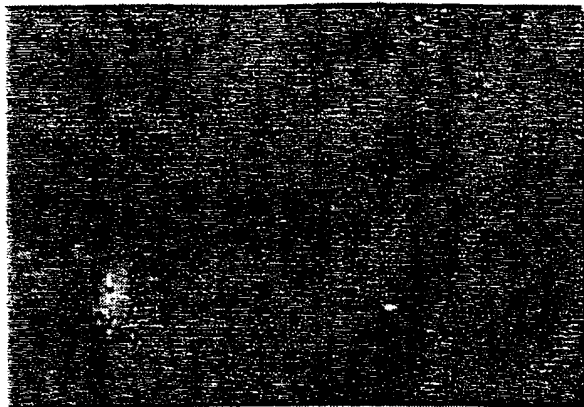


FIGURE 6F

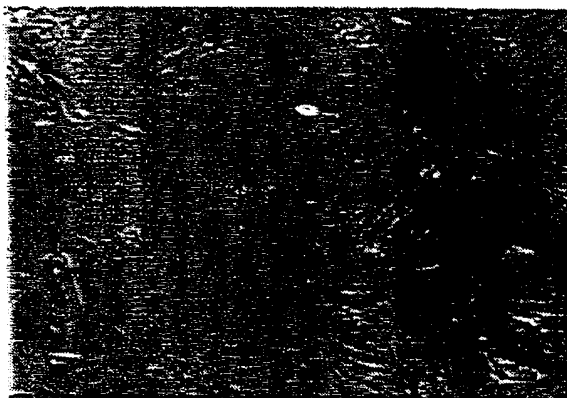
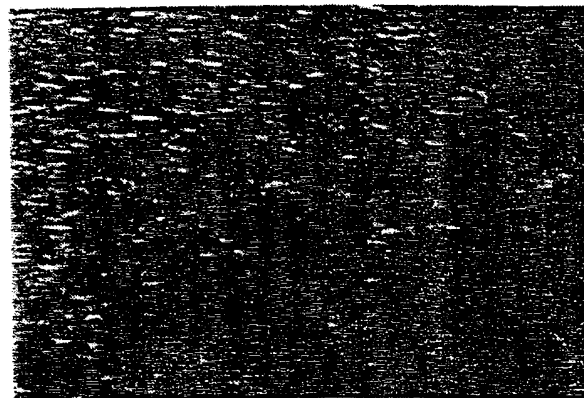
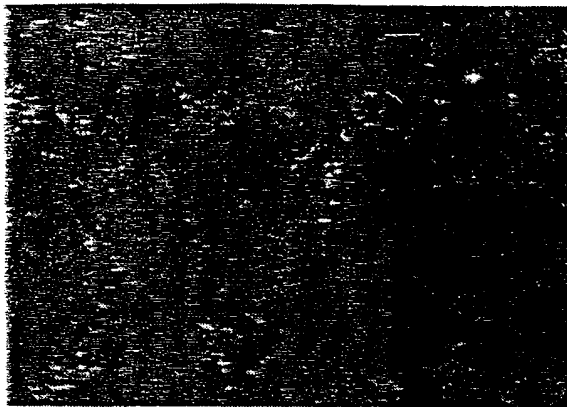


FIGURE 6G

FIGURE 6H

Multi-potential

- plastic
adherent
MSCs

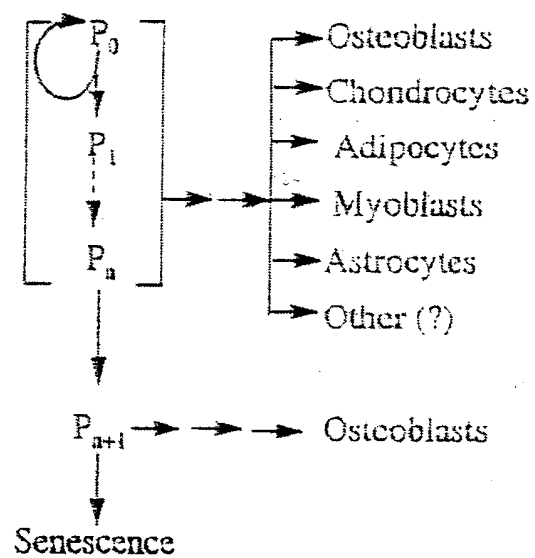
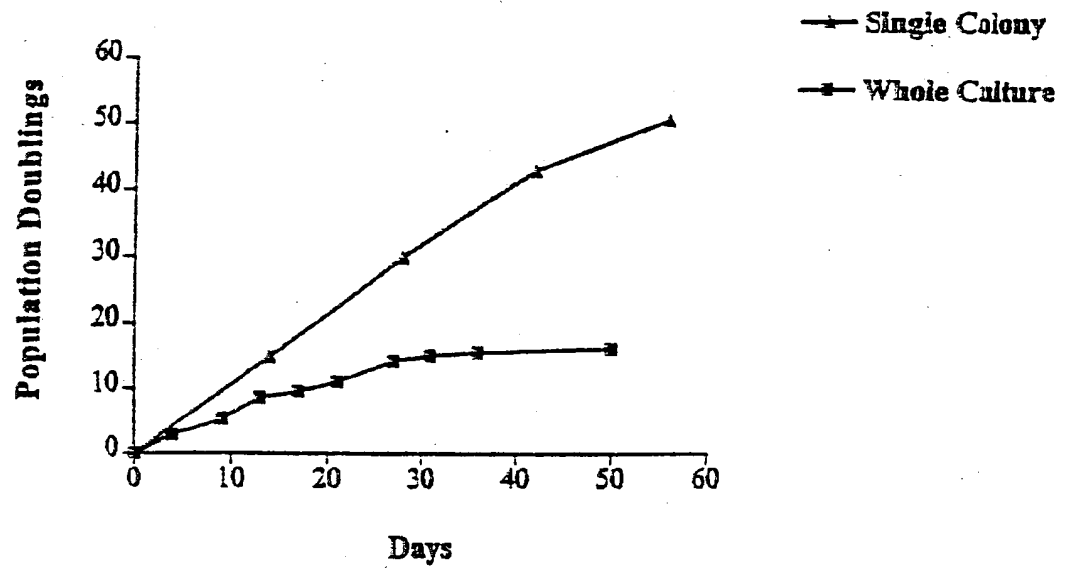


FIGURE 7

<u>DONOR 59R</u>	<u>TOTAL CELLS</u>	<u>CFU %</u>	<u>FOLD INCREASE</u>	<u>DOUBLINGS</u>
20 ml aspirate				
MNCs Plated on 176 cm ²	2.69×10^7 (MNCs)			
Trypsin Harvest (d11)	8.11×10^5	39 %		
Plated on 176 cm ²	528 (3 cells/cm ²)			
Trypsin Harvest (d10)	1.85×10^5	42 %	→ 350	9 db
Plated on 176 cm ²	528			
Trypsin Harvest (d10)	2.40×10^5	29 %	→ 455	9 db
Plated on 176 cm ²	528			
Trypsin Harvest	7.5×10^5		→ 1420	11 db

FIGURE 8



Donor 12 P1 $\xrightarrow{15 \text{ d}}$ CFU 28,000 Cells $\xrightarrow{15 \text{ d}}$ CFU 28,000 Cells $\xrightarrow{13 \text{ d}}$ CFU 6700 Cells $\xrightarrow{7-8 \text{ d}}$ CFU 116-279 Cells

Total Capacity = ~ 50 doublings

FIGURE 9

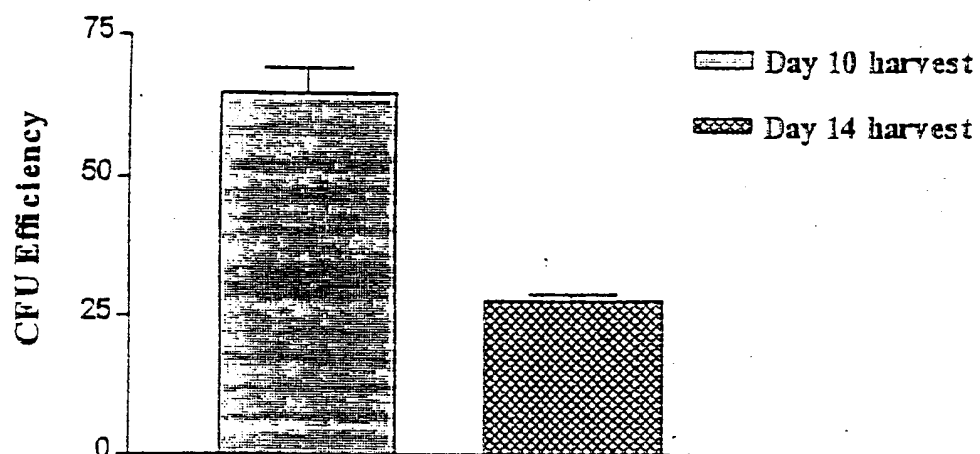


FIGURE 10

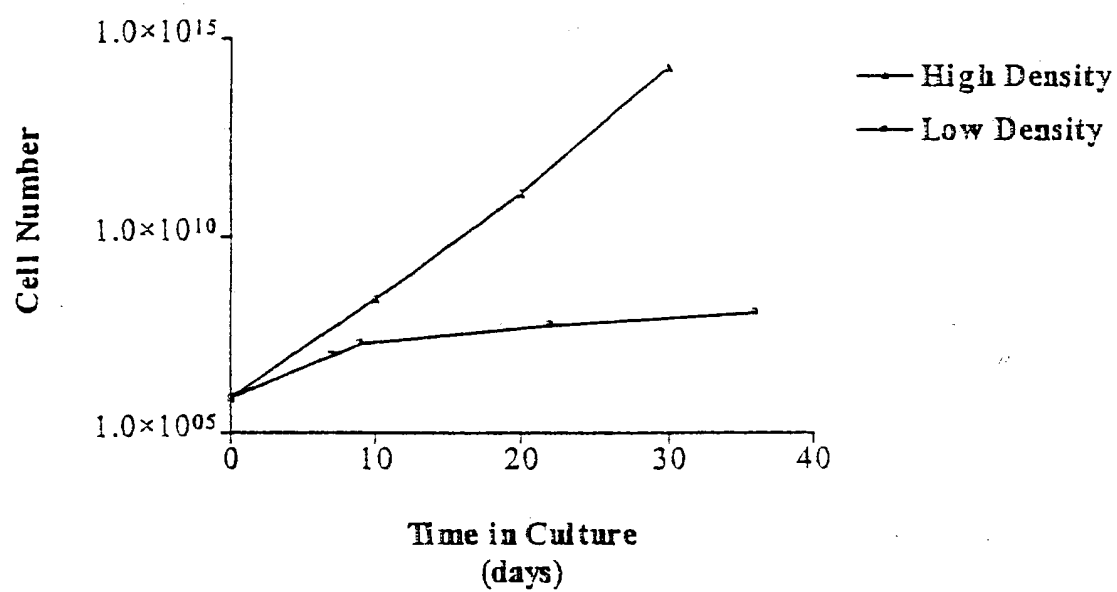


FIGURE 11

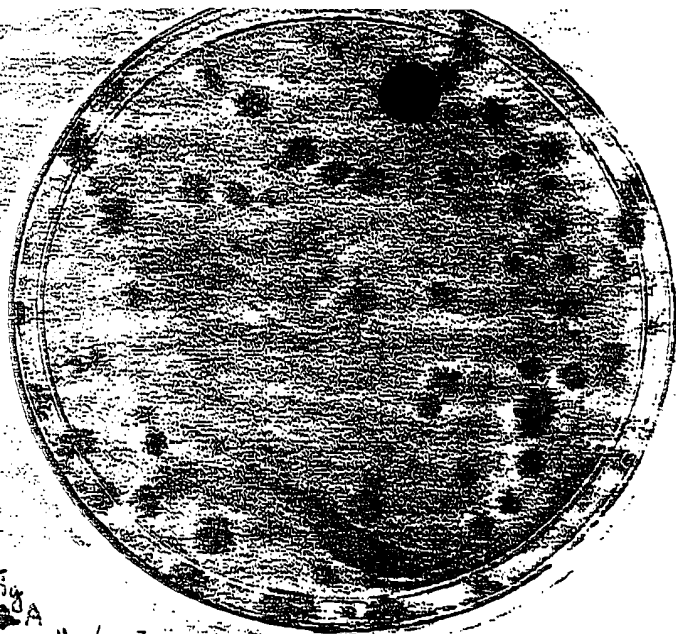


Fig. 12A
3.0 cells/cm²

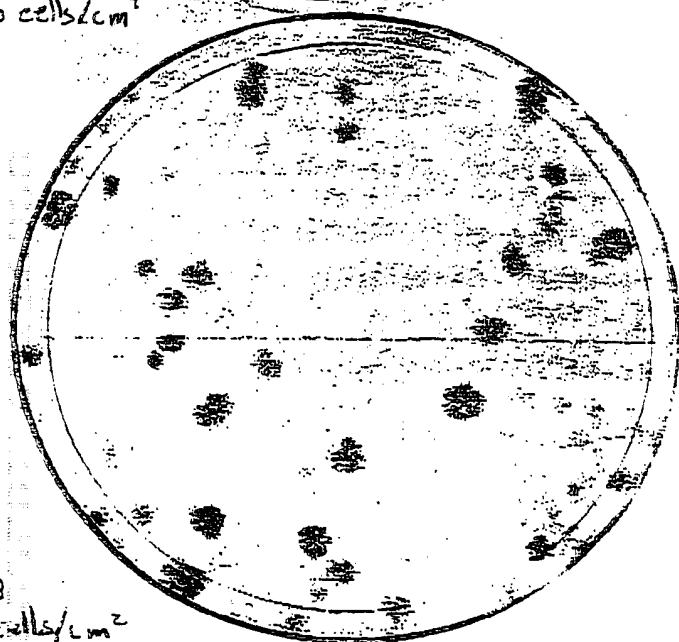
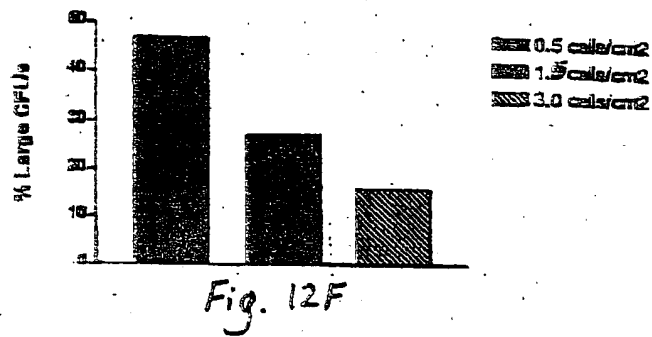


Fig. 12B
1.5 cells/cm²

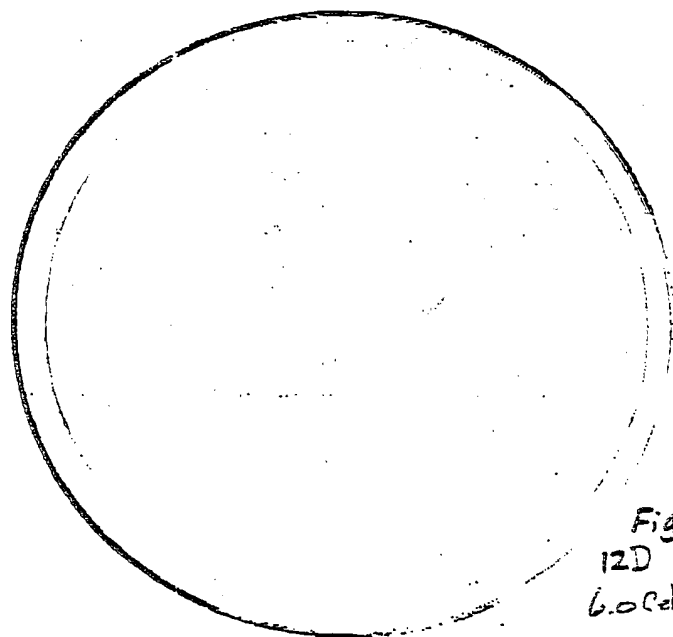


Fig. 12D
6.0 cells/cm²

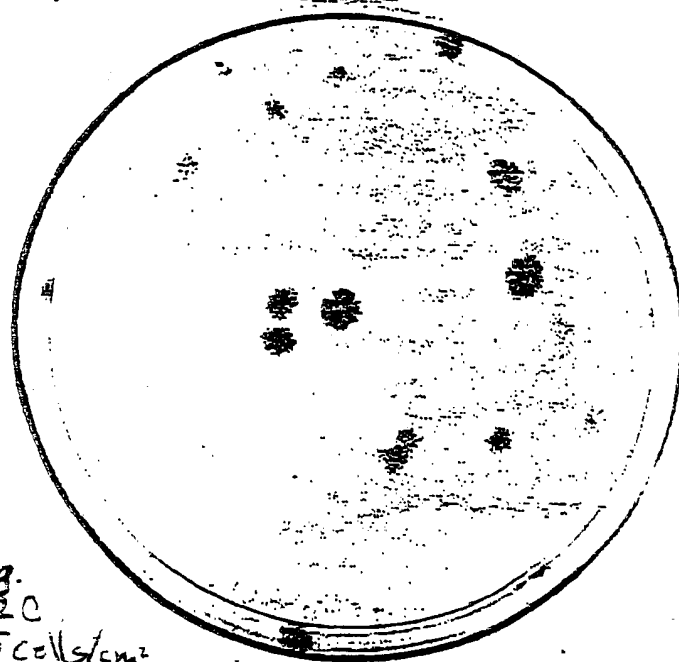


Fig. 12C
0.5 cells/cm²

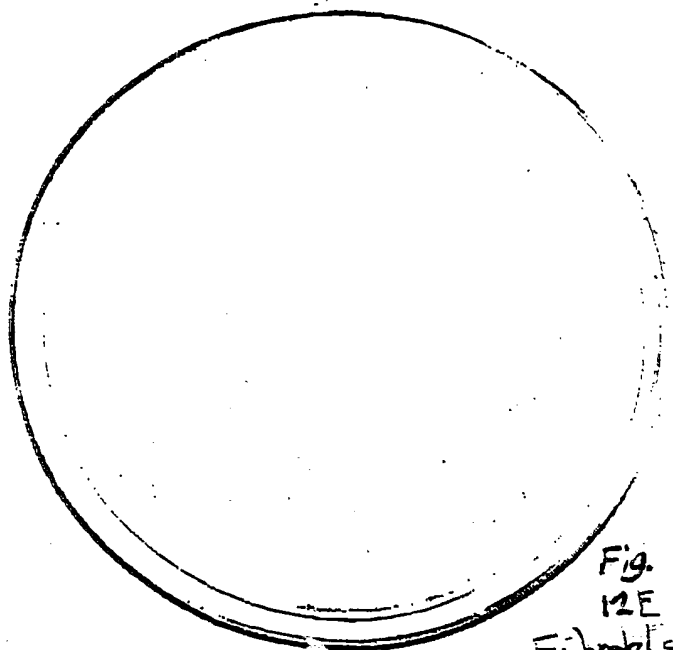


Fig. 12E
Fibroblasts
13.0 cells/cm²

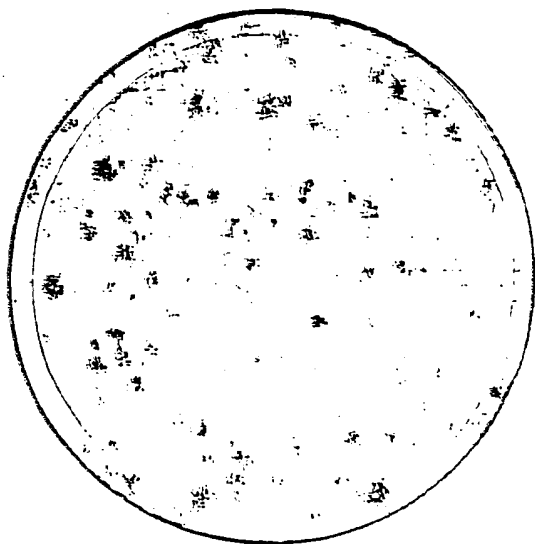


FIGURE 13A

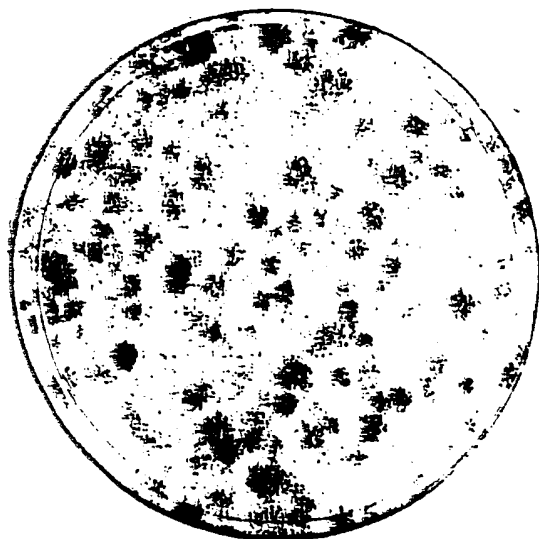
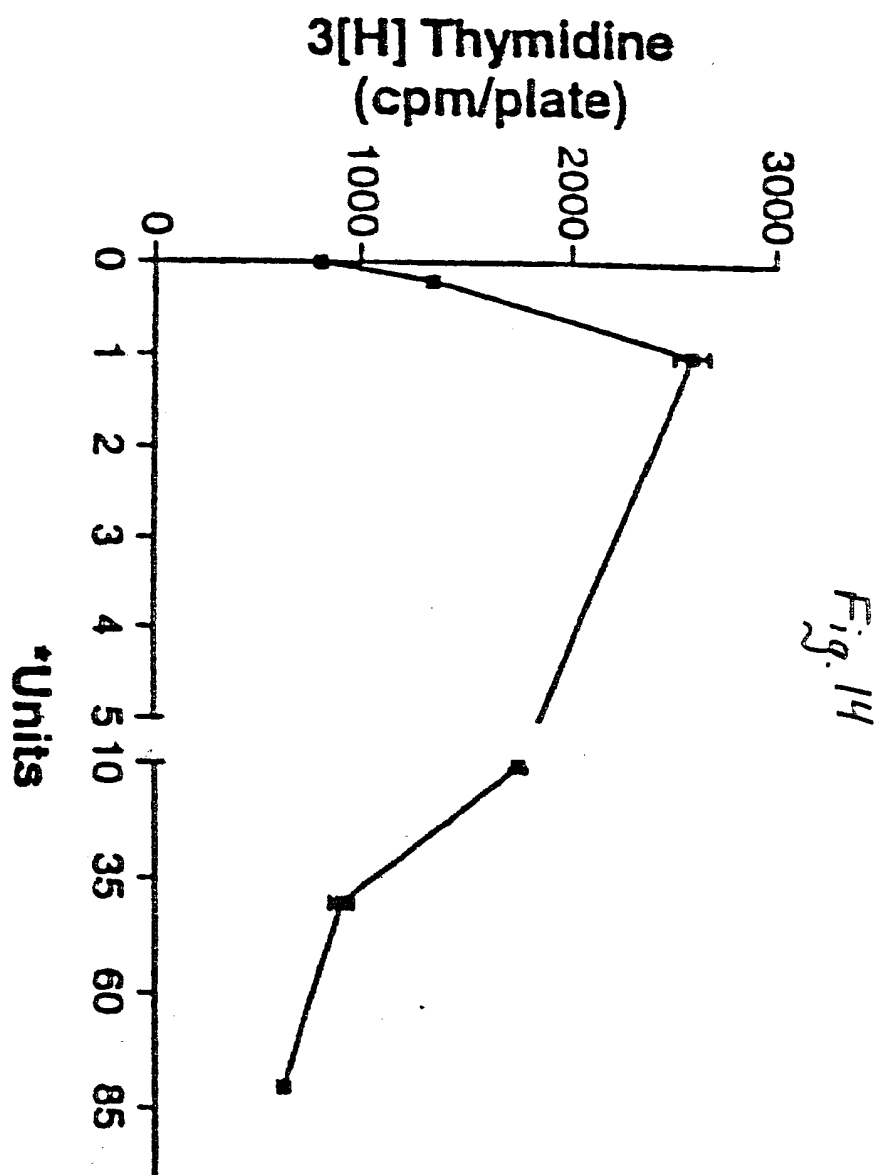


FIGURE 13B



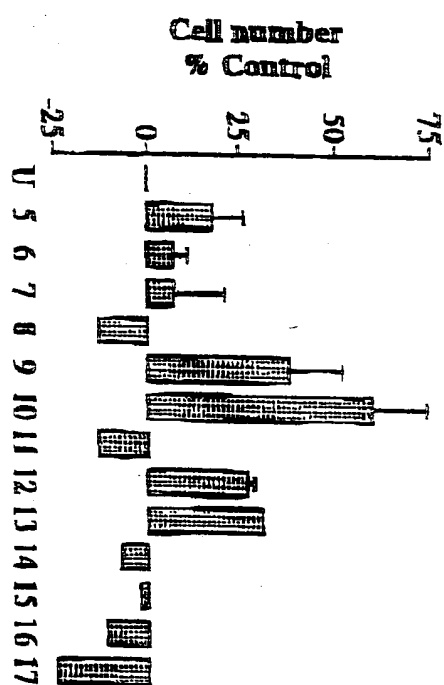


FIGURE 15

2 3 4 5 6

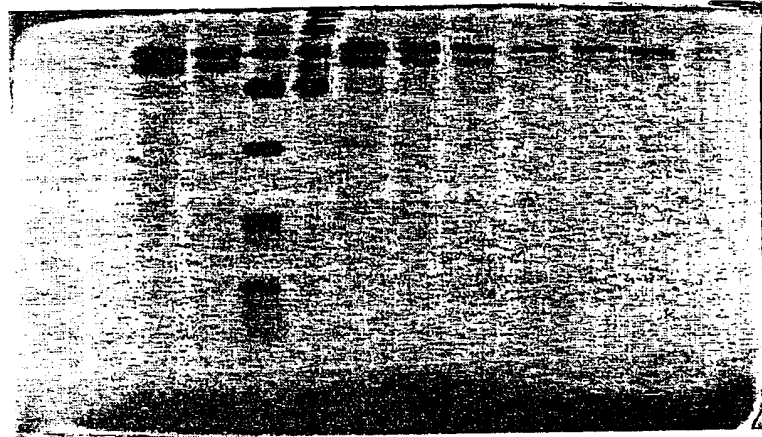
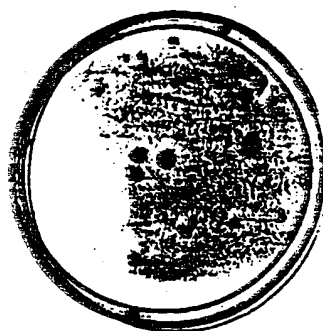
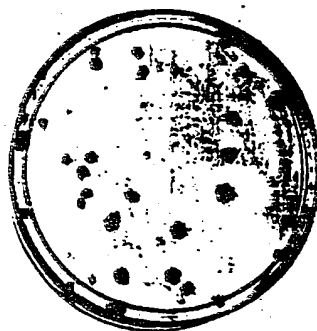


Fig. 16



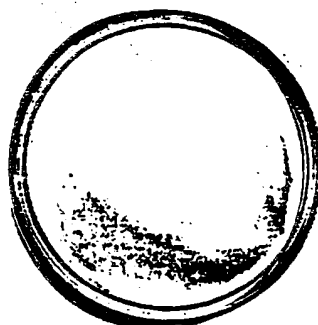
0.5



1.5

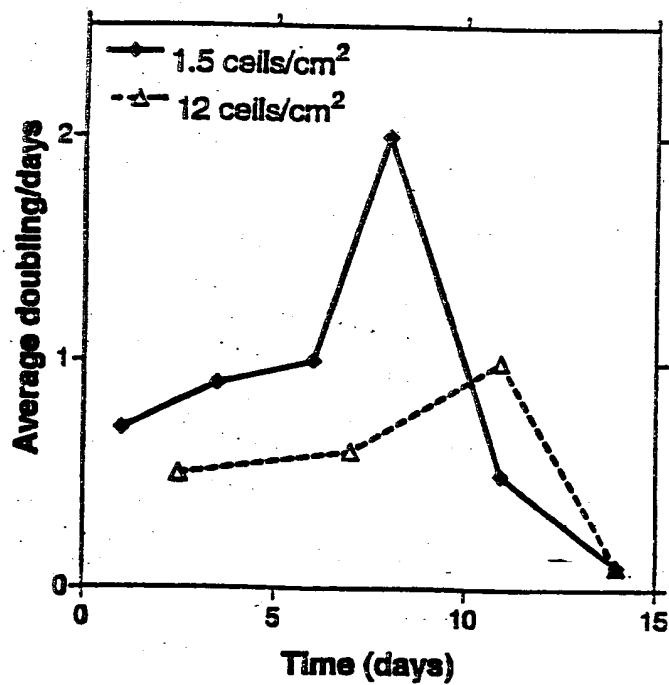
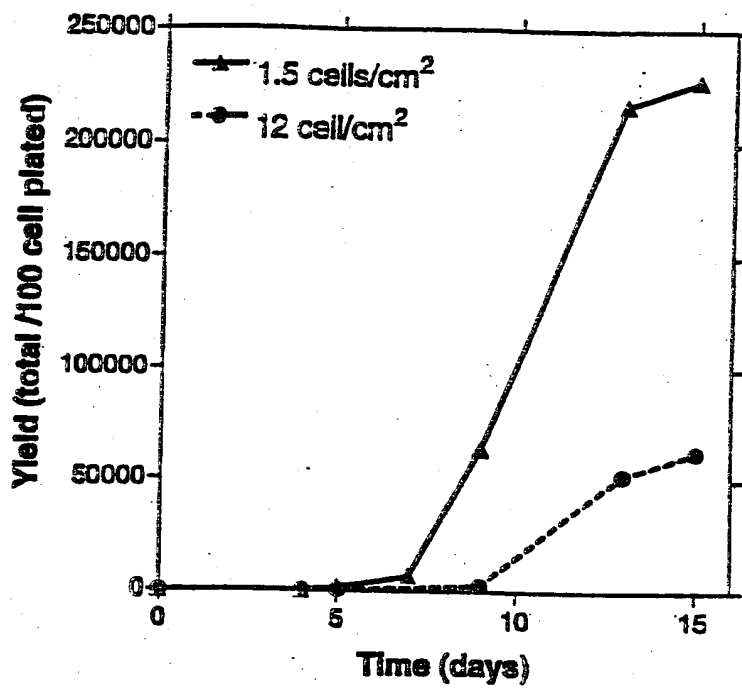


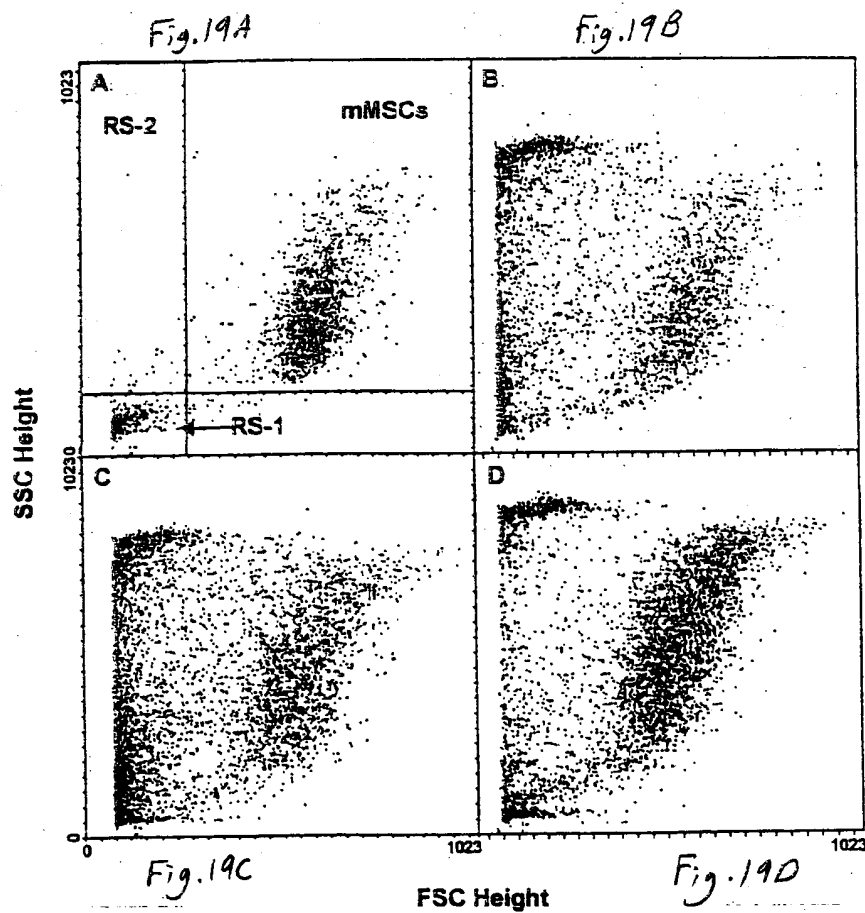
3.0



6.0

Fig. 17





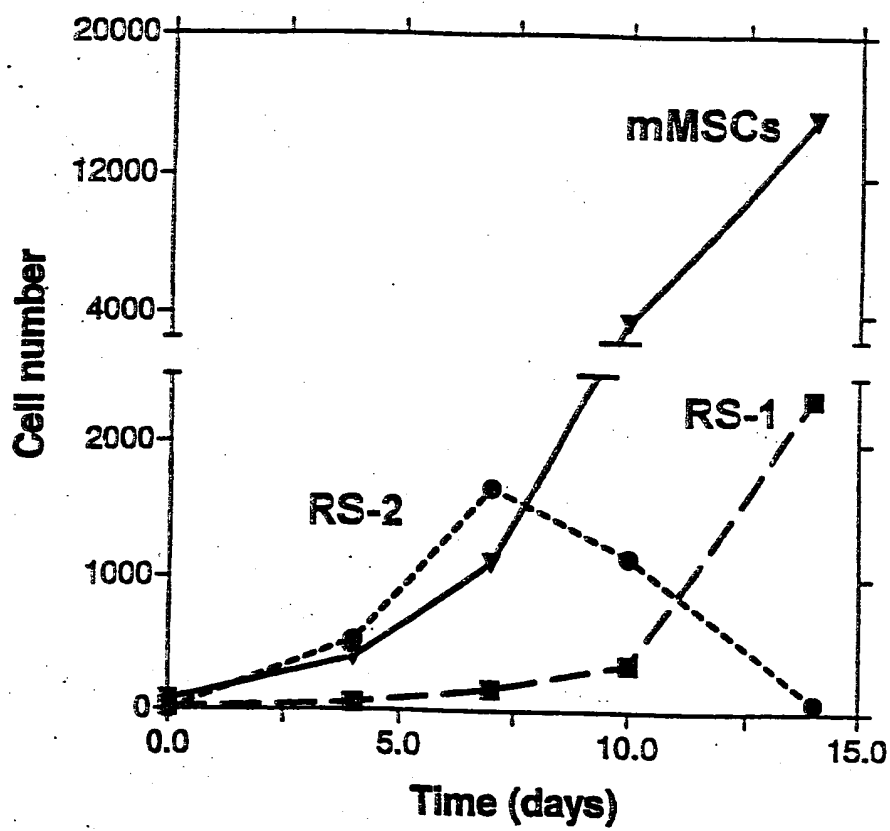


Fig. 20

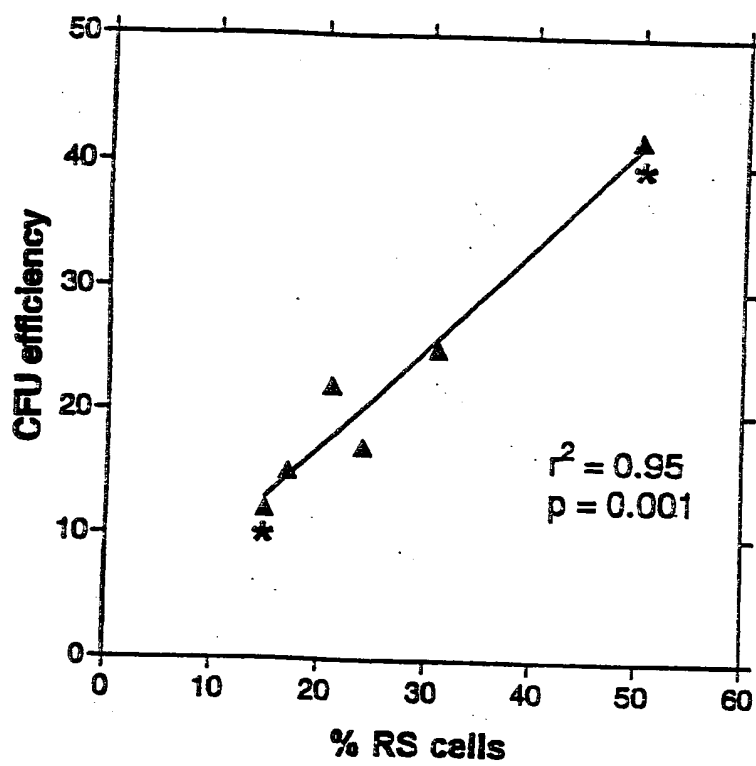


Fig. 21

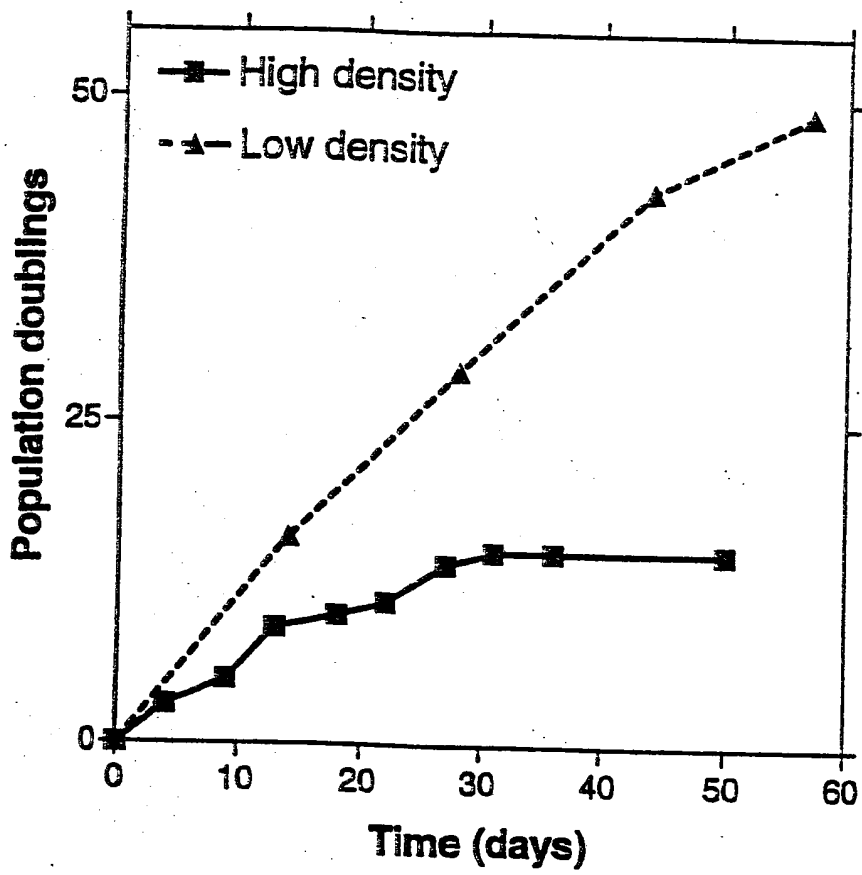


Fig. 22

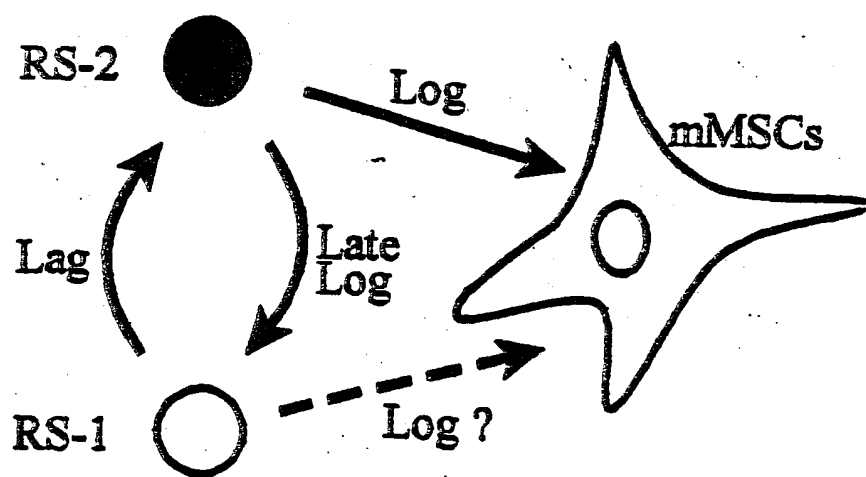
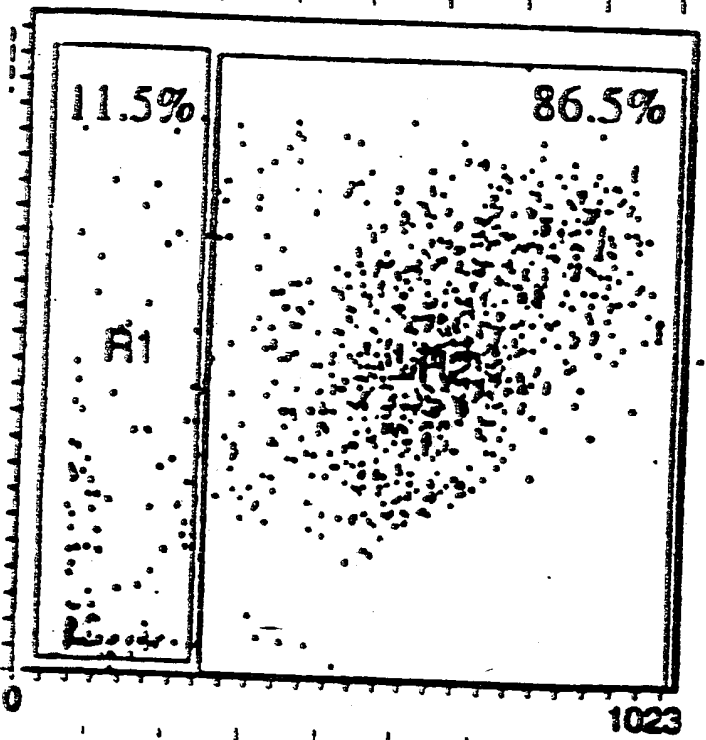
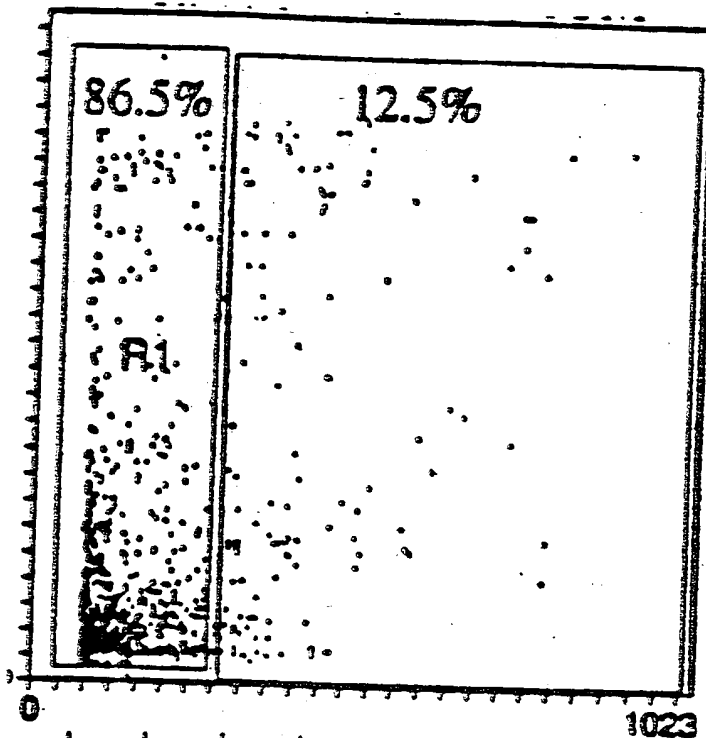


Fig. 23

Fig. 24



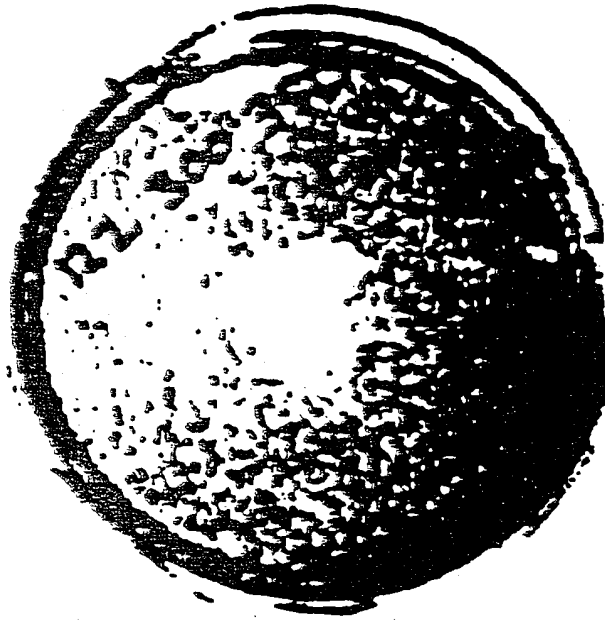
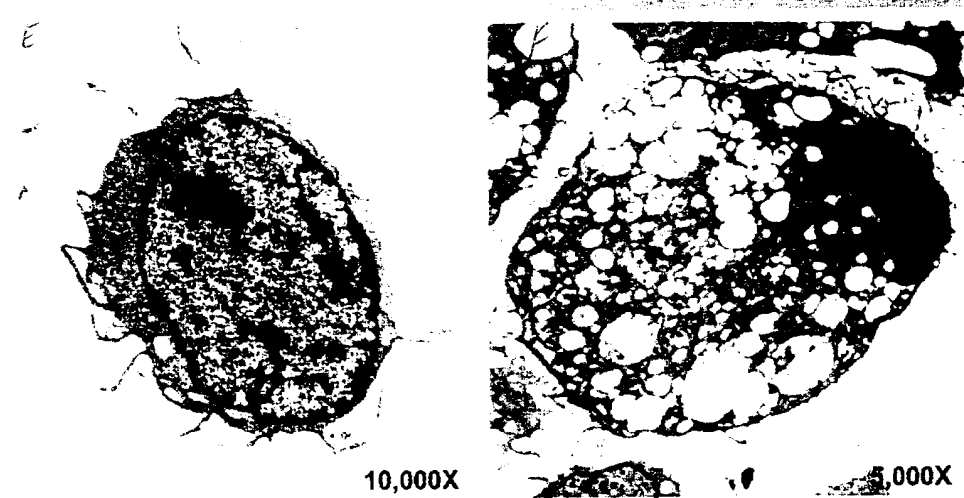
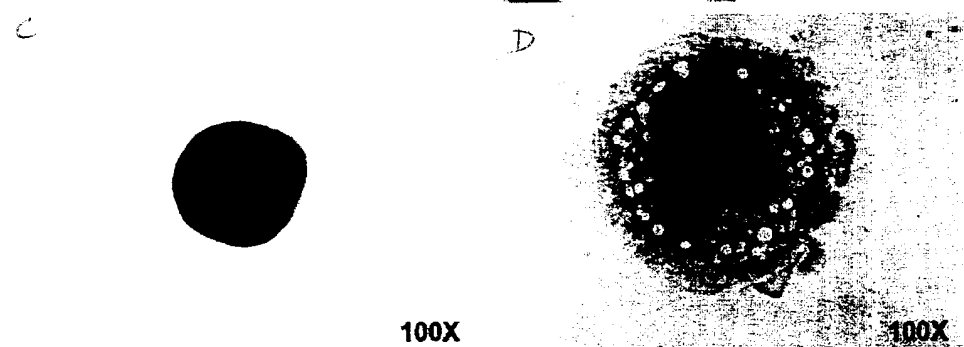
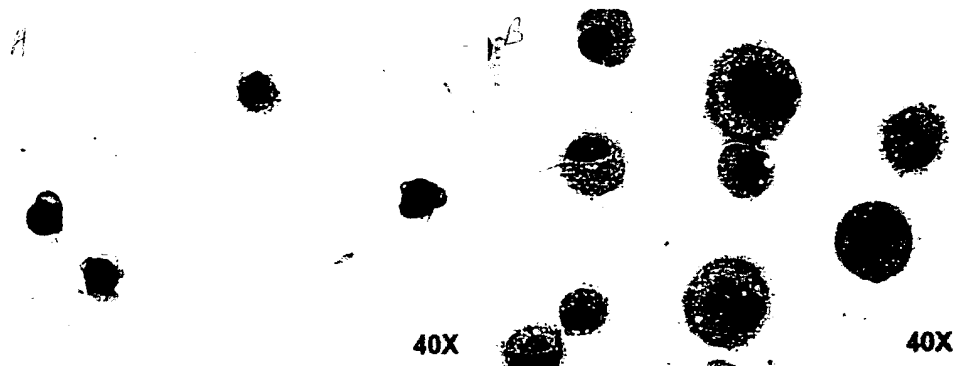


Fig. 25

EPITOPE PROFILE OF THE CELLS

EPITOPE	RS-1 CELLS	RS-2 CELLS	MATURE CELLS
CD34	Negative	Negative	Negative
CD11b (Mac-1)	Negative	Negative	Negative
CD43	Negative	Negative	Negative
CD45	Negative	Negative	Negative
CD31	Dim	Dim	Dim
CD38	Dim	Dim	Dim
CD117 (c-kit)	Dim	Dim	Dim
STRO-1	Negative	Negative	Dim
CD90 (Thy-1)	Dim	Negative	Positive
EMA	Dim	Negative	Negative
CD59	Positive	Negative	Positive
HLA-1	Negative	Negative	Negative
CD14	Negative	Negative	Negative
CCR5	Negative	Negative	Negative
PDGF-R	Negative	Negative	Dim
CD44	Positive	Negative	Positive
CD50	Negative	Negative	Negative
EGF-R	Negative	Negative	Dim
CD104	Dim	Dim	Negative
HLA-1	Dim	Dim	Positive
CD27	Negative	Negative	Negative
CD53	Negative	Negative	Negative
CD10	Negative	Negative	Positive
CD147	Negative	Negative	Positive
CD114	Negative	Negative	Negative
CD81	Dim	Negative	Positive
CD49e	Positive	Positive	Positive
Human L1	Negative	Negative	Negative
CD4	Dim	Dim	Negative
CD1a	Negative	Negative	Negative
CD109	Negative	Negative	Negative
MDR	Dim	Dim	Negative
BFGFR	Dim	Dim	Dim
FLK	Dim	Dim	Negative

Fig 26



RS-1

Mature MSCs

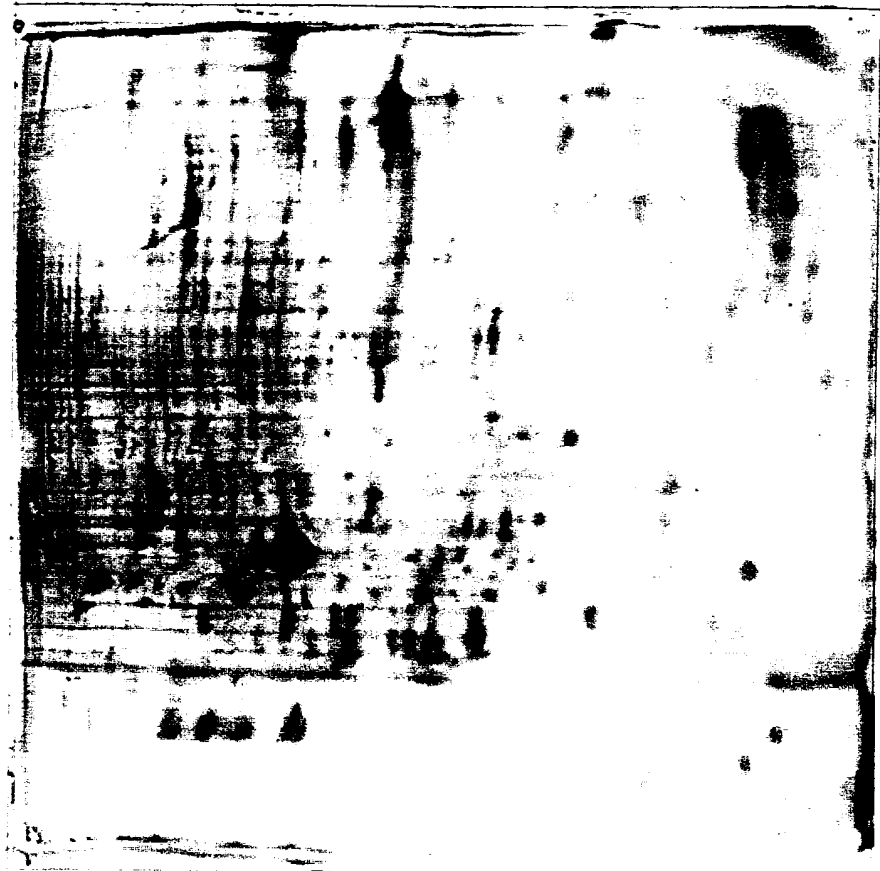
Fig 27A-E

SECRET

Fig 2009-B



Early lag



Late lag

Identification #	Code #	Source (NCBI#, MW, pI)
LB2D6-80-1 Day 5		
Spot 9	BS1-1-1	Myosin Regulatory Light Chain 2 (5453740, 19.8, 4.67)
Spot 10	BS1-1-2	Smooth Muscle Protein 22a (3123283, 22.6, 8.87)
Spot 14	BS1-1-3	Little data
Spot 15	BS1-1-4	Thioredoxin Peroxidase 2 (4505591, 22.1, 8.27)
Spot 22	BS1-1-5	Lipocortin II (4757756, 38.6, 7.6)
Spot 24	BS1-1-6	Citrate Synthase (4758076, 51.7, 8.13)
Spot 17	BS1-1-7	Glutathione Transferase Omega (4758484, 27.6, 6.24)
Spot 3	BS1-1-8	Little data
Spot 25	BS1-1-9	Little data
Spot 11	BS1-1-10	Ribosomal Protein S12 (4506683, 14.5, 6.31)
LB2D6-80-2 Day 12		
Spot 5	BS1-1-11	Lipocortin V (4502107, 35.9, 4.9)
Spot 8	BS1-1-12	Data
Spot 6	BS1-1-13	Data
Spot 1	BS1-1-14	Little data
Spot 17	BS1-1-15	Data
Spot 14	BS1-1-16	Little data
Spot 12	BS1-1-17	Data
Spot 4	BS1-1-18	Little data
Spot 15	BS1-1-19	Little data
Spot 11	BS1-1-20	Little data

The above table has previous identifications, and the six new ones. The peptides identified in each protein are shown on pages 5-10 in Sequest format, bold or underlined. Any amino acid differences from the database entry are noted above the sequence.

Fig. 29